

<b>Interview Summary</b>	<b>Application No.</b> 10/807,173	<b>Applicant(s)</b> HASHIMOTO, AKIYOSHI	
	<b>Examiner</b> David E. Martinez	<b>Art Unit</b> 2184	

All participants (applicant, applicant's representative, PTO personnel):

- (1) Mina Fujii. (3) Dov Popovici.  
 (2) Shrinath Malur. (4) David E. Martinez.

Date of Interview: 15 November 2005.

Type: a) ☐ Telephonic b) ☐ Video Conference  
 c) ☒ Personal [copy given to: 1) ☐ applicant 2) ☒ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
 If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 14 and 41.

Identification of prior art discussed: US PgPub No. US 2004/0003063A1 to Ashok et al. and US PgPub No. US 2002/0052914 A1 to Zalewski et al.

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Proposed Amendment attached and previously submitted by applicant was discussed with respect to claims 14 and 41. The limitations directed to the storage subsystem including the hard disk drives, a memory and a processor forming a virtual storage system were discussed in relation to the virtual computer. Examiner will update search upon formal filing of the amendment discussed. Proposed amendment appears to overcome the current rejection.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.



**DOV POPOVICI**  
**SUPERVISORY PATENT EXAMINER**

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
 Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

#### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

# Proposed Amendment

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No. : 10/807,173 Confirmation No. 4125  
Applicant : HASHIMOTO, A. et al.  
Filed : March 24, 2004  
Title : COMPUTER SYSTEM, CONTROL APPARATUS,  
STORAGE SYSTEM AND COMPUTER DEVICE  
TC/AU : 2182  
Examiner : D.E. Martinez  
Docket No. : G&P-105  
Customer No.: 24956

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

### **AMENDMENT**

Sir:

In response to the Office Action of October 5, 2005, please amend the above-identified application as follows.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 2 of this paper.

**Remarks / Arguments** begin on page \_\_ of this paper.

# Proposed Amendment.

Appl. No. 10/807,173  
Amendment dated \_\_\_\_\_  
Reply to Office Action of October 5, 2005

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## **Amendments to the Claims:**

This listing of claims will replace all prior versions and listing of claims in the application.

## **Listing of Claims:**

1-13 (Canceled)

14. (Currently Amended) A computer system comprising:

a computer having ~~a first resources~~ including a first processor and a first memory;

a storage system coupled to said computer having ~~a second resources~~ including physical disks storing data used by the computer, a second memory, and a second processor controlling an access to the physical disks;

a first information for managing said first resource;

a second information for managing said second resource;

a third information for managing a relation between a virtual computer ~~realized~~ configured on said computer and a virtual storage system ~~realized~~ configured on said storage system;

wherein said computer is configured ~~has a first function~~ to partition said first resources into a plurality of first partitions, each first partition including a part of resources of each of said first processor and said first memory, logically, and to make each first partition of said first resources run as an independent said virtual computer; and

wherein said storage system is configured ~~has a second function to partition~~  
~~said second resources into a plurality of second partitions, each second partition~~  
~~including a part of resources of each of said physical disks, said second memory,~~  
~~and said second processor,~~ logically, and to make each second partition of said  
second resources run as an ~~independent said virtual storage system; and~~  
wherein each virtual computer is configured to access a virtual storage system  
related to the virtual computer according to the third information.

15. (Currently Amended) A computer system according to claim 14, wherein  
said virtual computer ~~realizes said first function~~ is configured by a software  
executed by the first processor.

16. (Currently Amended) A computer system according to claim 14, wherein  
said virtual storage system ~~realizes said second function~~ is configured by a  
software executed by the second processor.

17. (Currently Amended) A computer system according to claim 14,  
wherein said computer has said first information,  
wherein said storage system has said second information,  
wherein said computer is configured to partition said first resource logically  
based on said first information, and

wherein said storage system is configured to partition said second resource logically based on said second information.

18. (Previously Presented) A computer system according to claim 14, wherein said computer has said first, second and third information.

19. (Currently Amended) A computer system according to claim 18, wherein said computer sends said second and third information to said storage system, and

wherein said storage system is configured to partition said second resources logically based on said second sent information.

20. (Previously Presented) A computer system according to claim 14, wherein said storage system has said first, second and third information.

21. (Currently Amended) A computer system according to claim 20, wherein said storage system sends said first information to said computer system, and

wherein said computer is configured to partition said first resources logically based on said first sent information.

22. (Currently Amended) A computer system according to claim 14, wherein

said first resources further include is any of a CPU, a memory, and an a first I/O adaptor coupled to said storage system, and

said second resources further include is any of a CPU, a memory, an a second I/O adaptor coupled to said computer and a disk device.

23. (Currently Amended) A computer system according to claim 14, wherein

said computer system further comprises:

a management terminal connected-coupled to said computer and said storage system; and

wherein said management terminal has said first, second and third information.

24. (Currently Amended) A computer system according to claim 23,

wherein said management terminal sends said first information to said computer system,

wherein said computer is configured to partitions said first resources logically based on said ~~sent~~ first information,

wherein said management terminal sends said second and third information to said storage system, and

wherein said storage system is configured to partition said second resources logically based on said ~~sent second and third~~ information.

25. (Currently Amended) A computer system according to claim 24, wherein

said management terminal is configured to display said first resources, which include resources allocated to each virtual computer, and said second resources, which include resources allocated to each virtual storage system related to said virtual computer, and a third resource allocated to said virtual computer and a fourth resource allocated to said virtual storage system related to said virtual computer, and said management terminal is configured to receive instruction ~~makes a screen appear to prompt a user to set said third to allocate first resources to a virtual computer and said fourth-second resources to a virtual storage system in said first and second resource.~~

26. (Currently Amended) A computer system according to claim 25, wherein

upon receipt of a request for performance required for said virtual computer and said virtual storage system, said management terminal calculates said first and second resources which are required to realize the performance, and sets said first, second and third information.

27. (Withdrawn) A computer system comprising:

a computer; a storage system; and a first information group;

said computer comprising:

a first processor which executes an information transaction,

a first memory storing information used for controlling of said first processor or information sent from an external device,

a first resource group including said first processor and said first memory, and

plural virtual computers generated by partitioning each resource in said first resource group logically;

said storage system comprising:

plural disk devices storing data sent from said computer,

a second processor which controls transmitting data to said plural disk devices,

a second memory storing information used for controlling said second processor or data sent from said computer,

a second group resource including said second processor and said second memory, and

plural virtual storage systems generated by partitioning each resource in said second group resource logically;

said first information group having:

information related between a first virtual computer in said plural virtual computers and a first virtual storage system in said plural virtual storage systems.

28. (Withdrawn) A computer system according to claim 27, wherein  
said computer has said first information group.

29. (Withdrawn) A computer system according to claim 27, wherein  
said storage system has said first information group.

30. (Withdrawn) A computer system according to claim 27, wherein  
said computer system further comprises:  
a management terminal connected to said computer and said storage system  
for managing resources in said computer and said storage system, and  
wherein said management terminal has said first information group.

31. (Withdrawn) A computer connected to a storage system,  
said computer comprising:  
a first resource;  
a first information for managing said first resource;

a second information for managing a second resource said storage system has:

a third information for managing a relation between a virtual computer realized on said computer and a virtual storage system realized on said storage system, and

a function to partition said first resource logically and to make each of partitioned said first resource run as an independent said virtual computer.

32. (Withdrawn) A computer according to claim 31, wherein  
said computer realizes said function by software.

33. (Withdrawn) A computer according to claim 31, wherein  
said computer partitions said first resource by using said first information.

34. (Withdrawn) A computer according to claim 31, wherein  
said computer sends said second and third information to said storage system to make said storage system partition said second resource logically.

35. (Withdrawn) A computer system according to claim 31, wherein  
said first resource is any of a CPU, a memory, and an I/O adapter.

36. (Withdrawn) A storage system connected to a computer,  
said storage system comprising:  
a second resource;  
a second information for managing said second resource; and  
a function to partition said second resource logically and to make each  
partition of said second resource run as an independent virtual storage system.
37. (Withdrawn) A storage system according to claim 36, wherein  
said storage system realizes said function by software.
38. (Withdrawn) A storage system according to claim 36, further comprising:  
a first information for managing a first resource of said computer; and  
a third information for managing a relation between a virtual computer realized  
on said computer and a virtual storage system realized on said storage system.
39. (Withdrawn) A storage system according to claim 38, wherein  
said storage system sends said first information to said computer to cause  
said computer to partition said first resource logically and to cause each partition of  
said first resource to run as an independent said virtual computer.
40. (Withdrawn) A storage system according to claim 36, wherein

said first resource is any of a CPU, a memory, and an I/O adaptor.

41. (Currently Amended) A management terminal to be coupled ~~connected to~~ a computer and a storage system wherein said computer has first resources including a first processor and a first memory, and said storage system has second resources including physical disks storing data accessed from said computer, a second processor controlling to access said physical disks, and second memory, comprising:

a first information for managing asaid ~~first resources~~ of said computer;

a second information for managing asaid ~~second resources~~ of said storage system; and

a third information for managing a relation between a virtual computer ~~realized~~ configured on said computer and a virtual storage system ~~realized~~ configured on said storage system,

wherein said management terminal sends said first information to said computer to cause said computer to partition said first resources into a plurality of first partitions, each first partition including a part of resources of each of said first processor and said first memory, logically, and to cause each first partition of said first resources ~~run as an independent said virtual computer,~~

wherein said management terminal sends said second information to said storage system to cause said storage system to partition said second resources into a plurality of second partitions, each second partition including a part of resources of

each of said second processor, second memory, and physical disks, logically, and to cause each second partition of said second resources run as a virtual storage system, and

wherein said management terminal sends said third information to said computer and said storage system to cause each virtual computer to access a virtual storage system related to the virtual computer based on said third information.

42. (Currently Amended) A management terminal according to claim 41, wherein  
said first resources further include ~~is any of a CPU, a memory, and an I/O~~  
adaptor; and

~~said second resources further include is any of a CPU, a memory, an I/O  
adaptor and a disk device.~~

43. (Currently Amended) A management terminal according to claim 41, wherein  
said management terminal is configured to displays said first resources, which  
include resources allocated to each virtual computer, and second resources, which  
include resources allocated to each virtual storage system related to said virtual  
computer ~~a third resource allocated to said virtual computer, and a fourth resource  
allocated to said virtual storage system; and~~

said management terminal is configured to receive instruction ~~makes a screen  
appear to prompt a user to~~ allocate first resources to a virtual computer and set said

~~third resource and said fourth second resources to a virtual storage system in said first resource and said second resource.~~

44. (Currently Amended) A management terminal according to claim 43, wherein  
upon receipt of a request for performance required for said virtual computer  
and said virtual storage system, said management terminal calculates ~~said first and~~  
second resources which are required to realize the performance, and sets said first,  
second and third information.

**REMARKS / ARGUMENTS**

Claims \_\_\_\_ and \_\_\_\_ remain pending in this application. Claims \_\_\_\_ have been canceled without prejudice or disclaimer. New claims \_\_\_\_ have been added. Claims \_\_\_\_ have been withdrawn.

**Priority**

Applicants appreciate the Examiner's acknowledgment of the claim for priority and safe receipt of the priority document.

**35 U.S.C. §112**

Claim 19 has been amended to overcome the outstanding rejection under this section.

**35 U.S.C. §§102 and 103**

Claims 14-16 and 22 stand rejected under 35 U.S.C. §102(b) as being anticipated by Zalewski et al (U.S. Pub. No. 2002/0052914). Claims 17-21, 23, 24, 41 and 42 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Zalewski et al (U.S. Pub. No. 2002/0052914). Claims 25 and 53 stand rejected under

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35 U.S.C. §103(a) as being unpatentable over Zalewski et al in view of Ashok et al  
(U.S. Pub. No. 2002/0003063). These rejections are traversed as follows.

**Conclusion**

In view of the foregoing, Applicant respectfully requests that a timely Notice of  
Allowance be issued in this case.

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

By \_\_\_\_\_  
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